

REMARKS

Attached to this response are the following documents: Power of Attorney and Correspondence Address Indication Form; and two terminal disclaimers. The attached Power of Attorney authorizes the practitioners associated with customer number 58,134 to represent this application.

The issues raised by the examiner in the Detailed Action mailed October 13, 2005 will now be addressed.

First, regarding the restriction requirement, the election of claims 1-17 and 20 (group I) is affirmed. Contrary to the provisional election made with traverse by Ms. Ann Skerry on 8/15/2005 during a telephone interview with the examiner, this election is now made *without* traverse. Withdrawal of claims 18 and 19 (group II) from further consideration by the examiner in this application is acknowledged. Withdrawal of claims 18 and 19 does not require the deletion of either inventor.

Second, claims 1-9, 16 and 17 stand rejected under the judicially created doctrine of obviousness type double patenting as being unpatentable over claims 1-8 of U.S. Patent No. 6,889,963. One of the two enclosed terminal disclaimers justifies withdrawal of this rejection. Claims 1-9, 16 and 17 also stand rejected under the judicially created doctrine of obviousness type double patenting as being unpatentable over claims 1-6 of U.S. Patent No. 6,699,562. The second of the two enclosed terminal disclaimers justifies withdrawal of this rejection.

Third, claims 1-17 and 20 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. With regard to claim 1, the examiner stated,

“In claim 1, the term “a greatest dimension perpendicular to the length defining a diameter of the element” is a relative term. It is unclear what the “greatest dimension” is referred to.” (See the first paragraph on page 5.)

The applicant respectfully points out that the meaning of the phrase “greatest dimension” can be determined by referring to Fig. 1 and the description found in the first sentence of paragraph 00020, which states:

“The element 10 of FIGURES 1-3 can have a length L, along the axis of rotation R, and a greatest dimension D, perpendicular to the axis of rotation, which defines the diameter of the packing element.”

Fig. 1 clearly shows the “greatest dimension” which is labeled “D”. Furthermore, the first sentence of paragraph 00016 states:

“The containing Structure 12 is essentially cylindrical in shape and this is understood to include perfect cylinders and shapes in which a round cylindrical shape has been somewhat flattened to create an oval cross-section as well as regular and irregular polygonal shapes with at least five sides.”

Consequently, the claimed packing element may be an oval or a polygonal shape which has a diameter that varies between a “minimum distance”, which is the shortest distance between two opposing surfaces that define portions of the structure’s perimeter, and a “greatest dimension” which is the longest distance between two opposing surfaces that form portions of the structure’s perimeter. By including the phrase “greatest dimension” in independent claim 1 the applicant intended to clearly define how a structure’s diameter is to be measured in order to calculate the structure’s ratio of diameter to length which is specified in depending claims 5, 6 and 7. Because the meaning of the phrase “greatest dimension” can be determined by consulting the written specification and Fig. 1, withdrawal of the rejection of claims 1-17 and 20 based on the phrase “greatest dimension” is warranted and requested.

With regard to claims 12 and 15, the examiner pointed out that both claims recite the same subject matter since the septa in claim 12 appears to be the only structure exists in the ceramic packing. The applicant appreciates the examiner pointing out this error. Claim 15 has been cancelled.

Fourth, claims 1-9, 16 and 17 stand rejected under 35 U.S.C. 102(b) as being anticipated by Chernyshev et al (WO-99/29425). Claims 1-8, 10-17 and 20 stand rejected under 35 U.S.C. 102(e) as being anticipated by Morita et al (US 2003/0170160) and claim 9 stands rejected as being unpatentable under 103(a) over Morita. Prior to addressing amendments to the claims, the applicant would like to specifically point out that the applicant’s invention and specification are used to create a bed of ceramic packing elements that facilitate transferring heat to or from a fluid stream or provide a surface at which the transfer of mass takes place between fluid phases. In contrast, neither of the cited references describes ceramic media for use in heat transfer or mass transfer processes. Consequently, the applicant asserts that the cited references are directed to a different technical field and therefore should not be considered as appropriate references to cite against the applicant’s claimed invention.

Turning now to the amended claims, Claim 1 has been amended to distinguish over the teachings in both Chernyshev and Morita by amending claim 1 to read upon a “A bed of randomly oriented ceramic packing elements wherein each element comprises ...” Support for this amendment can be found in paragraph 23, line 5, and in the first sentence of paragraph 32. This amendment distinguishes over Morita which repeatedly

emphasizes that its teachings are directed to "monolithically molded type porous honeycomb support". See, for example: paragraph 0018, line 1; paragraph 0073, line 3; paragraph 0074, line 2; paragraph 0171, line 2; and paragraph 0195, line 18. Monolithic supports are carefully oriented and stacked in a column or tower rather than dumped in the tower. Consequently, the monolithic supports are not randomly oriented as amended claim 1 now requires. This amendment also distinguishes over Chernyshev which describes prism like elements that are placed side-by-side to form a layered honeycomb structure rather than the randomly oriented structures now described by amended claim 1. As described in the applicant's specification in paragraph 0001, "This invention relates to packing elements of the type that are often called "random" or "dumped" packings." The above described amendment to claim 1 limits the claimed invention so that the cited references cannot be viewed as disclosing the applicant's claimed invention. Withdrawal of the rejections based on Chernyshev and Morita is requested.

With regard to the specification, the applicant has deleted the paragraph that begins on page 1, line 1 and replaced it with the paragraph shown in the "In the Specification" section of this response. The paragraph was rewritten to show the proper relationship between the subject application and the previously filed priority applications. Furthermore, two of the priority applications have matured into two US patents which are identified in the new paragraph.

Claims 15 and 20 have been canceled. Claims 1-14, 16 and 17 remain in the application and allowance of the same is requested.



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April 13, 2006